ABSTRACT

This invention provides a soft-reference magnetic memory digitizing device. In a particular embodiment the digitizing device includes an array of soft-reference magnetic memory cells. Each memory cell has at least one ferromagnetic sense layer characterized by an alterable orientation of magnetization, the orientation changing upon the substantially proximate application of at east one externally-applied magnetic field as may be provided by a magnetically tipped stylus. Each memory cell also provides at least one ferromagnetic soft-reference layer having a non-pinned orientation of magnetization. An intermediate layer forming a magnetic tunnel junction is placed between the sense layer and soft-reference layer. The orientation of the sense layer is not substantially affected by the soft-reference layer. A related method of use involving a magnetic stylus is also provided.